



April/May 2014

Xplor

adventures in nature



MANSIONS IN THE BRANCHES

A *TREE*-MENDOUS NUMBER OF
ANIMALS LIVE AMONG THE LEAVES



COMMENTS



ON THE COVER



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by Noppadol Paothong

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A tree is home to a *tree*-mendous number of animals.

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Eastern whip-poor-will

Xplor

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ON THE WEB

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WHAT IS IT?

DON'T KNOW?

Jump to Page 16 to find out.



- ① I spring up in spring before trees leaf out.
- ② I look like a shiny — but tiny — green umbrella.
- ③ You *may* eat my “apple,” but avoid the rest of me.
- ④ My name is only half right.

YUM discover

Black-capped chickadee

American goldfinch



Sunflower

Grow Your Own BIRDSEED

Sunflowers are bird magnets. Plant a few rows of these happy yellow flowers in spring, and you'll keep every cardinal, goldfinch, and chickadee in your yard fat and happy all autumn long. Sunflowers aren't picky plants. All you need is a sunny patch of well-drained soil that is sheltered from the wind.

For growing tips, sow this in your web browser: xplormo.org/node/27241.

Listen for Whip-poor-wills

Whip-poor-wills are so well-camouflaged they're nearly impossible to see. But the big-mouthed birds are easy to hear. Just pitch a tent in the woods on a full-moon night in April or May. Shortly after sunset, whip-poor-wills will begin calling — and won't shut up for quite some time. On nights when the moon is bright, whip-poor-wills hunt for moths, beetles, and other flying insects all night long, so you'd better pack your earplugs!



Eastern whip-poor-will: Glenn Bartley/Visuals Unlimited, Inc.

Nature wakes up in April and May. Birds sing, wildflowers bloom, and fish finally find their appetites. With so much going on, it's hard to decide what to do. Here are a few ideas to get you started.

Meet Your Wild NEIGHBORS

There are probably more animals living in your yard than you think. To find out, sketch your yard on a piece of paper. Then, go outside and look for



animal homes. Search trees for robin nests, woodpecker holes, and squirrel dens. Check your lawn for mole tunnels. Explore grassy areas for rodent burrows, spider webs, and rabbit nests. Whenever you find an animal's home, mark its location on your map. But don't wear out your welcome with these newfound neighbors. Animals may move away if you visit too long.

Don't miss the chance to Discover Nature at

Get eye to beak with birds of prey at **WINGS OVER WATER**. Runge Conservation Nature Center, Jefferson City; April 24, 6:30–7:30 p.m.; For info, call 573-526-5544.



Great-horned owl

Get wet and wild at **WETLANDS FOR KIDS**. August A. Busch Memorial Conservation Area, St. Charles April 5, 10 a.m.–3 p.m. For info, call 636-441-4554.

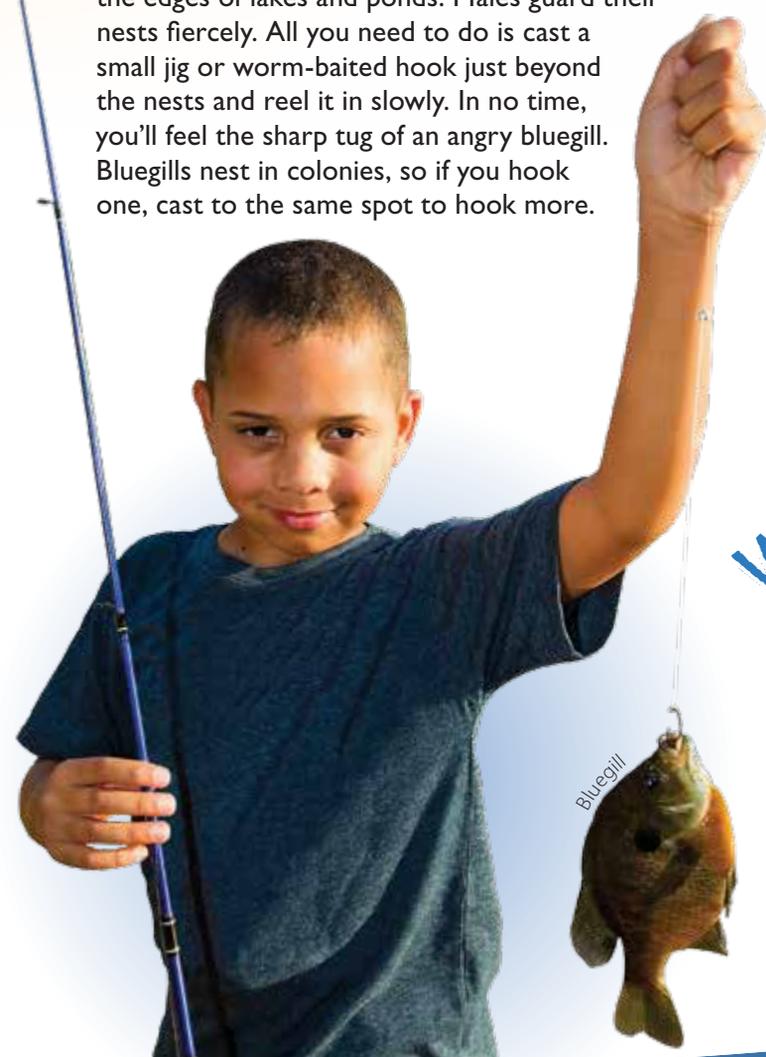


Rainbow trout

Hook a rainbow (trout) at **KIDS' FREE FISHING DAY**. Maramec Spring Park, St. James Ages 15 and younger May 17, 6:30 a.m.–8:25 p.m. For info, call 573-265-7801, ext. 22.

Give Bluegills a Go

If fish don't bite fast enough for your patience, give bluegills a go in late May. This is when male bluegills fan out saucer-shaped nests in the shallow water along the edges of lakes and ponds. Males guard their nests fiercely. All you need to do is cast a small jig or worm-baited hook just beyond the nests and reel it in slowly. In no time, you'll feel the sharp tug of an angry bluegill. Bluegills nest in colonies, so if you hook one, cast to the same spot to hook more.



Bluegill

Listen to LOVE SONGS

By April, the sounds of spring are in full swing, and each puddle and pool overflows with a chorus of amphibian calls. Cricket frogs, chorus frogs, toads, treefrogs, and spring peepers seem to compete to see who can sing loudest to attract a mate. To hear these crooning croakers serenade their sweethearts, head outside at sunset and explore shallow puddles, wet fields, and flooded ditches. For help identifying who's singing, hop over to xplormo.org/node/2915.



Gray treefrog

Watch an Animal Actor

If birds could win Oscars, the killdeer would be a shoo-in for best actor. To lure predators away from their nests, these tan-and-white shorebirds act like they have broken wings. To see this performance, search for killdeer in mowed pastures, gravel parking lots, and athletic fields. Listen for a shrill *kill-dee-dee-dee* call to help pinpoint one of the birds. Then, slowly approach. You'll know you're near a nest when the mama or papa killdeer begins to drag its wing dramatically.



Killdeer

these fun events.

Learn to bag a gobbler at the **YOUTH TURKEY CLINIC AND HUNT.**

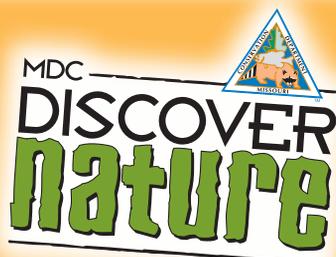
Conservation Department Office, Kirksville; 5:30 p.m., April 11 to noon, April 12 Register at 660-785-2420.



Wild turkey

Both kids and parents shoot at **FAMILY ARCHERY.**

Burr Oak Woods Conservation Nature Center, Blue Springs Ages 8 and older April 19, noon-2 p.m. Register at 816-228-3766.



Looking for more ways to have fun outside? Find out about Discover Nature programs in your area at xplormo.org/node/2616.

PREDATOR

VS.

PREY

The struggle to survive isn't always a fair fight. Here's what separates nature's winners from its losers.

Illustration by David Besenger

Fast and Furious

The agile Cooper's hawk is built for speed. This bird-hunter's short, powerful wings and long, rudder-like tail make it a nimble flier in thick woods and along hedgerows.

Cooper's hawk

Brutal Bonus Points

With deadly talons splayed wide, the hawk hits hard. The impact collapses its legs, which creates a vice-like grip for piercing and holding its prey.

Shock and Awe

Cooper's hawks dive bomb through forest openings to surprise prey. Sometimes, these clever hawks fly fast from behind trees to sneak attack their next snack.

Warning Call Chorus

White-throated sparrows warn their flockmates of a possible attack with a loud *Chip! Chip!* Other sparrows join the chorus as they all head for cover.

White-throated sparrow

Playing it Safe

These little sparrows play a good defense by hunkering down in thickets and avoiding open areas where hawks may be on the prowl.

AND THE WINNER IS...

Today, the Cooper's hawk's surprise attack was successful. But it's always a throw of nature's dice — the Cooper's hawk captures its prey in only about one out of 10 tries.

Missouri is a great state for birdwatching (also called birding). Of the approximately 900 bird species in North America, more than 400 have been recorded in Missouri, and more than 150 species regularly nest here.

Birding is fun no matter the season, and there's no better place to get started than right outside your window. Follow these pointers and you'll be a better birder in no time.

How To

Become a Better Birder



SHAPE

Pay close attention to a bird's shape in flight. **Barn swallows** have sharply angled wings and a forked tail. Many other birds, such as geese and turkey vultures, have distinctive shapes in flight, too.

SIZE

Some birds, like Canada geese, have immense wingspans. Other birds could easily fit in the palm of your hand. Gauging their size will help narrow your ID.

Generally, hawks and other birds of prey are much larger than birds commonly seen at birdfeeders, such as chickadees, sparrows, and robins.



From left: **Black-capped chickadee**, 5½ inches; **Rock pigeon**, 12½ inches; **American crow**, 17½ inches; **Canada goose**, 48 inches

COLOR

Many birds' feathers (called plumage) vary throughout the year, but look for colors that jump out the most.

Eastern bluebirds are easy to spot with their bright blue head cap and wings, and reddish chest.



Start out by learning Missouri's common birds, such as robins, crows, cardinals, Canada geese, blue jays, and pigeons. Others, such as the downy woodpecker and great blue heron, have distinctive colors and shapes you'll soon know by heart.



Ready to learn more?

White-breasted nuthatch

The Conservation Department offers free publications to get you started. Request a copy of **Feeding Backyard Birds** and **Enjoying Missouri's Birds** by emailing pubstaff@mdc.mo.gov.

THE HUNT FOR THE

INCREDIBLE, EDIBLE MOREL

by Brett Dufur • photos by David Stonner

This spring, mouth-watering morel mushrooms start popping up on forest floors throughout Missouri. Time to lace up your boots, grab a basket, and head to the woods for some fungi fun!

Wandering the woods on a quest for morels is like nature's version of an Easter egg hunt. Be ready to scout the forest floor with your eagle eyes because morels are only 3 to 4 inches tall (the length of your finger). When you find one, hoot and holler then stop and drop! More morels are probably hidden nearby.

Morels are easy to identify and delicious to eat. Increase your chances for success by tagging along with an experienced mushroom hunter.



WHEN TO FIND MORELS

- » The day after a warm rain
- » When the temperature climbs into the 50s
- » When mayapples bloom
- » When big crappie start biting
- » When oak leaves are as big as a squirrel's ear

WHERE TO FIND MORELS

- » Damp woods and river bottoms, on south-facing slopes
- » Near mayapples
- » Near elms, as well as ash, basswood, and cherry trees
- » Old orchards and burned or recently logged areas

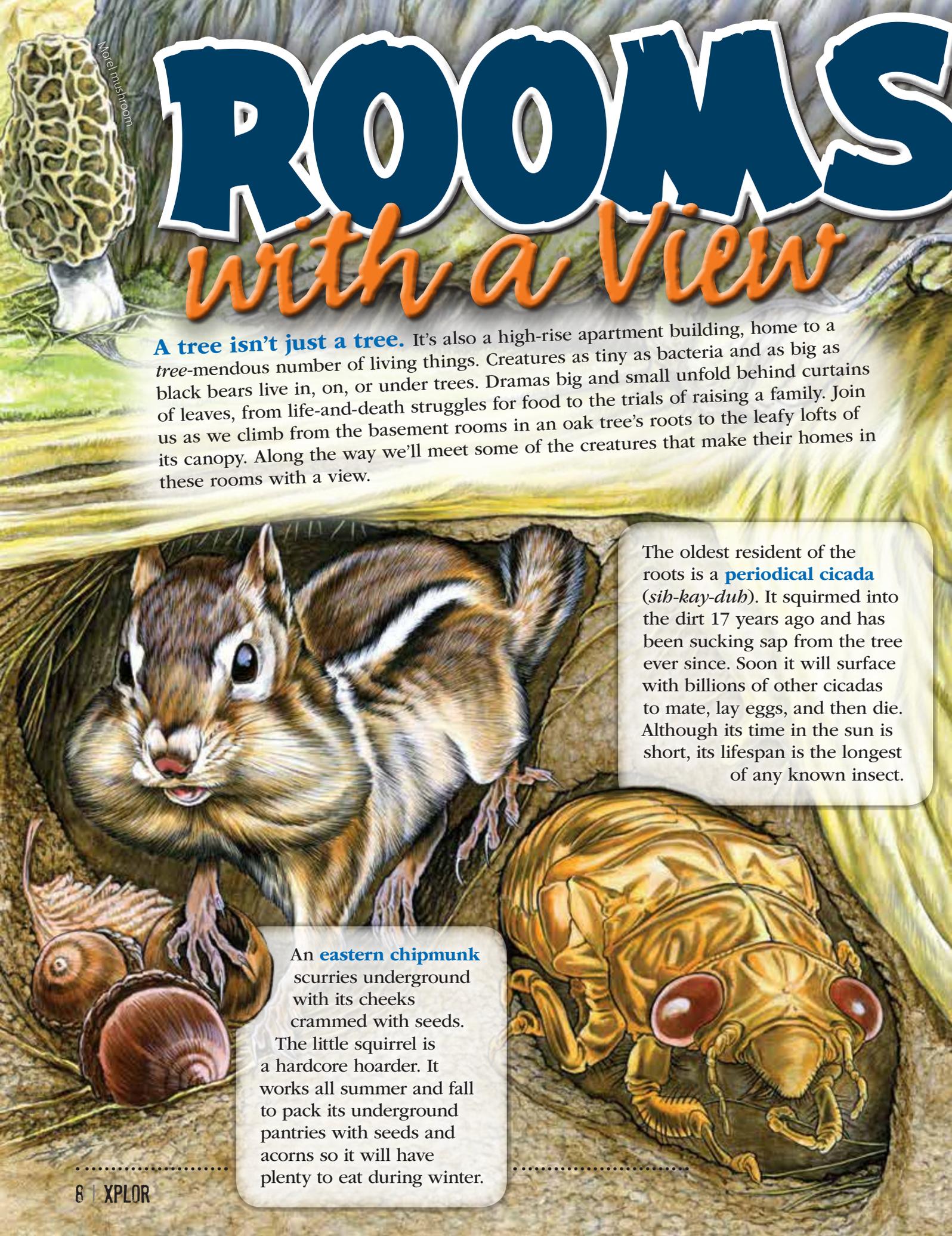
MOREL MUNCH-FEST

What's the only thing better than finding morels? Eating morels! With an adult's help, morels are easy to prepare. Some of the most popular recipes are also the easiest, using nothing more than breading, a hot skillet, and butter. Find tasty recipes at mdc.mo.gov/node/18921. Just remember, before eating your morels, clean them, slice them in half, and soak them in salt water.

A word of warning: Make sure you can identify morels before eating them. Get hunting and ID tips online at mdc.mo.gov/node/3397. If you eat the wrong type of mushroom, you can get sick.



Bring your friends and family on the hunt, since more eyeballs could add up to more mushrooms. Get others hooked on the fun by watching the Conservation Department's morel mushroom hunting video at mdc.mo.gov/node/10277.



Morel mushroom

ROOMS

with a View

A tree isn't just a tree. It's also a high-rise apartment building, home to a *tree-mendous* number of living things. Creatures as tiny as bacteria and as big as black bears live in, on, or under trees. Dramas big and small unfold behind curtains of leaves, from life-and-death struggles for food to the trials of raising a family. Join us as we climb from the basement rooms in an oak tree's roots to the leafy lofts of its canopy. Along the way we'll meet some of the creatures that make their homes in these rooms with a view.

The oldest resident of the roots is a **periodical cicada** (*sib-kay-duh*). It squirmed into the dirt 17 years ago and has been sucking sap from the tree ever since. Soon it will surface with billions of other cicadas to mate, lay eggs, and then die. Although its time in the sun is short, its lifespan is the longest of any known insect.

An **eastern chipmunk** scurries underground with its cheeks crammed with seeds. The little squirrel is a hardcore hoarder. It works all summer and fall to pack its underground pantries with seeds and acorns so it will have plenty to eat during winter.

by Matt Seek
artwork by
David Besenger

Whose tail is this?
Turn the page to find out! →

A **ring-necked snake** hides under a blanket of leaves, making a snake snack out of an unlucky earthworm. When scared, the tiny serpent curls its tail into a corkscrew and flashes its reddish-orange underside. The bright tail is a decoy, luring predators away from the snake's head.

Earthworm

Legs churning, a **centipede** tunnels slowly through the soil. The tunneling keeps the soil loose, which helps the tree's roots stay healthy. Centipedes use their first pair of legs, which are sharp and tipped with venom, to capture prey such as mites, earthworms, and insect larvae.

Mite



A pileated woodpecker has returned just in time to find an unwanted visitor at her front door. A black snake is snooping around her chicks, and it's up to the mother bird to convince the serpent, by pecking and flapping fiercely, that easier meals are found elsewhere.

A northern walkingstick won't set any speed records, but it doesn't need to. The twig-like insect is perfectly camouflaged for a life in the leaves. It even sways its body

to mimic the movement of branches in a breeze. Walkingsticks nip back leaves, which encourages new ones to sprout.

Oak leaf gall

Texas ratsnakes — aka black snakes — love to bask in the branches. Scales on the snake's tummy have sharp edges that grip bark. The snake climbs the tree like a Slinky, anchoring the front part of its body, pulling up its tail, and then anchoring its tail so it can push up its head. While they're aloft, black snakes raid nests, looking for birds and eggs to eat.

Gray treefrogs live aloft, using their sticky toes to climb high into trees. The snack-sized amphibians have a handy trick to hide from hungry hunters. As the frog climbs, its skin changes color, turning gravel-gray, bark-brown, or leafy-green to match whatever it's clinging to.

Oyster mushroom



An oak isn't just an animal apartment. It's also a diner where migrating birds like this **northern parula** can pluck a quick bite from the tree's leaves. If given a choice, parulas prefer crunchy spiders or juicy caterpillars, but any insect will fit the bill.

A **red bat** hangs from a limb, taking a breather from bagging bugs. Despite its brick-red color, the bat is well-adapted for living in trees. When snoozing, red bats often dangle by one foot, twisting in the breeze like a clump of dead leaves.

A female **polyphemus moth** rests after laying her eggs on a leaf. The moth's wings hide a surprise. When the wings are folded, they look like dead leaves. But when the wings unfurl, they reveal large spots that look like angry eyes. The "eyes" startle would-be predators, giving the moth time to escape.

Can you find where the moth laid her eggs?
Hint: Check the leaves at the top of this page.



Mom
eggs

Red-eyed vireos like a room with a view. Mother vireos weave tiny, hammock-like nests at the tips of branches and glue them in place with sticky strands of spider silk. While mom sits on her eggs, dad feeds her food. Once the eggs hatch, both parents search for chow to feed the chicks.

In late May, **gray squirrels** catch the love bug. Male squirrels show that they're interested in a female by chasing her up, down, and around trees. Sometimes several males chase the same female. When this happens, the stronger, faster guy usually gets the girl.

WILD JOBS

BIRD ECOLOGIST
BRAD JACOBS
KEEPS A
CLOSE EYE ON
MISSOURI'S
FEATHERED
FRIENDS.

Q: WHAT DOES A BIRD ECOLOGIST DO?

A: I study birds to learn which ones need help from conservationists. I also work with people in Missouri and people in other states and countries to improve bird habitat.

Q: WHY DO YOU WORK WITH PEOPLE IN OTHER STATES AND COUNTRIES?

A: Because birds fly, they can migrate elsewhere to find food. To protect Missouri's birds, we have to protect habitat in all the places birds might end up, from Canada to Brazil.

Q: DO YOU GET MANY QUESTIONS FROM BIRDWATCHERS?

A: Yes, I get lots — easy and hard ones. During a radio interview I enjoyed a question about a rare gull that had shown up in Missouri. The host asked, "How did it get here?" I said, "I think it flew here." I couldn't resist.

Q: WHAT'S THE WORST PART OF YOUR JOB?

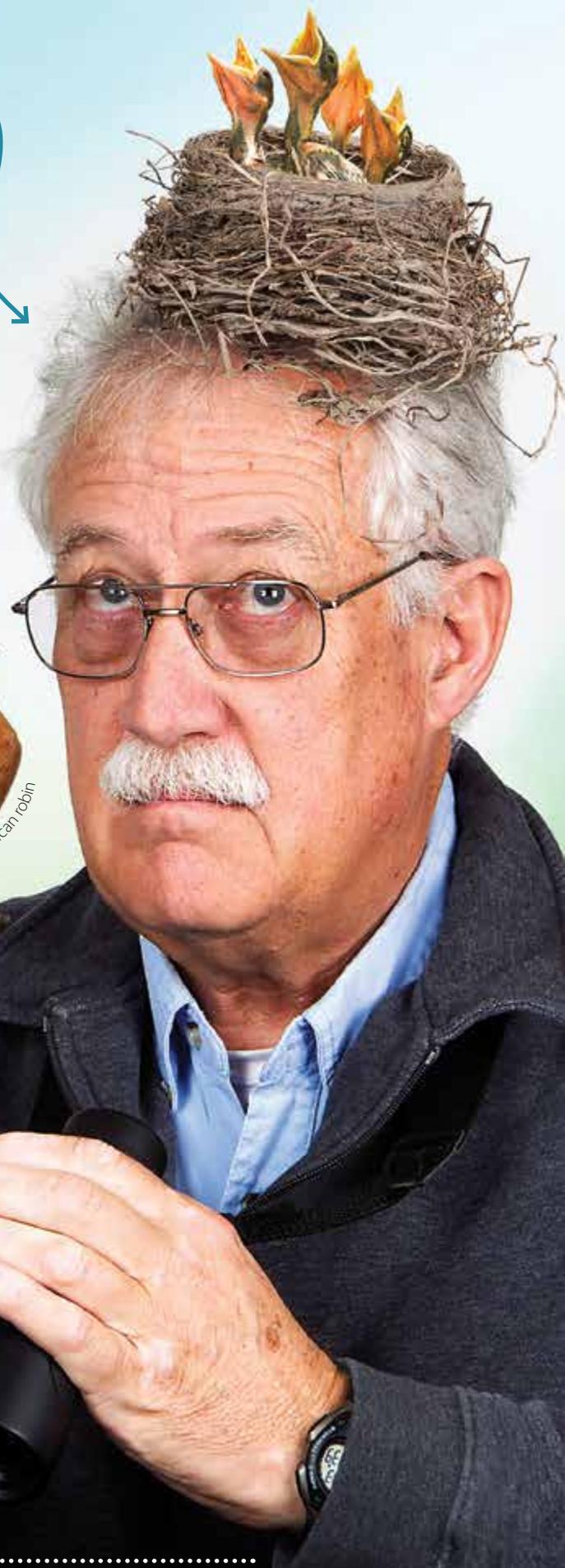
A: I love my job, but there are hazards. Once, I was walking inside an old barn looking for barn owls. I searched the rooms on the creaky first floor but decided it was too dark to climb around the second floor. When I returned at daylight, after a strong wind had passed through, the barn was flat on the ground.

Q: WHAT'S THE BEST PART OF YOUR JOB?

A: I enjoy being able to walk outside and know who's there with me: plants, animals, and especially birds.

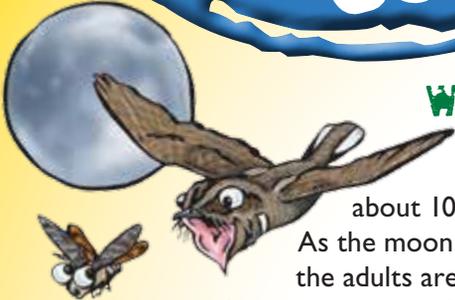


American robin



STRANGE but TRUE!

YOUR GUIDE TO ALL THE
UNUSUAL, UNIQUE,
AND **UNBELIEVABLE**
STUFF THAT GOES
ON IN NATURE



EASTERN WHIP-POOR-WILLS

time their egg laying so that their chicks hatch about 10 days before a full moon. As the moon gets brighter each night, the adults are able to hunt longer and catch more insects to feed their growing chicks.

SOME MALE CRICKET FROGS

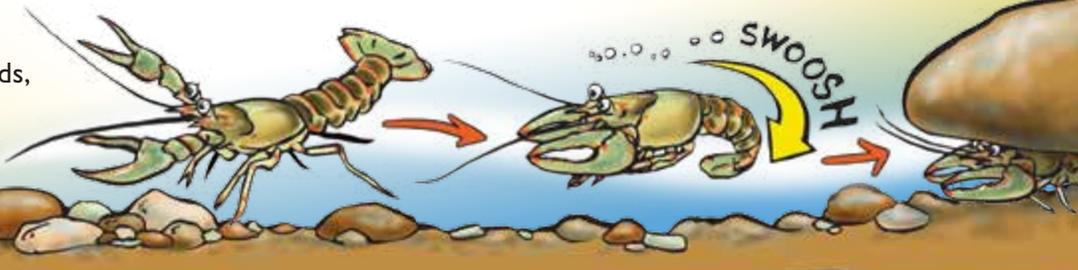
have a sneaky way of getting a girlfriend: They hang out quietly nearby while other males sing to attract a mate. When female frogs come courting, the silent males try to get to the females first.



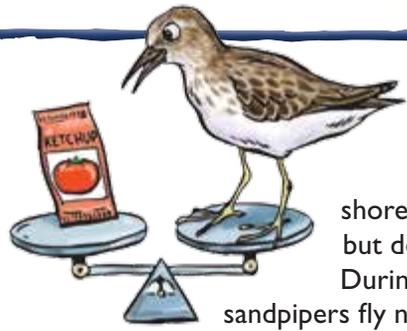
Male BLUESTRIPE DARTERS

are quick-change artists. During spawning, the little fish change from their normal coloration to having thick, dark stripes on their backs within just a few minutes.

CRAYFISH use their fan-shaped tails like canoe paddles. By pulling their tails quickly toward their heads, the *claw-ful* crustaceans can swoosh backwards at nearly 25 miles per hour.



Nest fest. If a **YELLOW WARBLER** finds a cowbird egg in its nest, does it kick the egg out? Nope. The warbler simply builds a new nest atop the unwanted egg. If cowbirds keep coming back, this can result in a stack of up to six nests.



LEAST SANDPIPERS

are the smallest shorebirds in the world, but don't tell them that. During migration, some sandpipers fly nonstop from New England to South America, a distance of up to 2,500 miles. Not bad for a bird that weighs just a little more than a ketchup packet.

During winter hibernation, **BLACK BEARS** can sleep for 100 days without eating, drinking, peeing, or pooping. One of the first things a bear does when it wakes up is go to the bathroom.



XPLOR MOR

The Name Game

Do you have more than one name? Maybe your name is “Gabriel,” but everyone calls you “Gabe.”

Or, maybe you have a nickname like “Slugger” or “Freckles.” Many animals have more than one name, too. For example, mountain lions are called cougars, catamounts, pumas, panthers, and wildcats. With that many nicknames, things get confusing. That’s why biologists use scientific names. Every animal has only one scientific name. Scientific names are made up of two words, usually Latin or Greek, that tell you something about the animal — if you speak Latin or Greek. Nicknames tell you something about an animal too, but the information isn’t always as accurate.

What do you call a loggerhead shrike that doesn’t have eyes?

Play the name game to find out.

- 1 Draw a line to connect each animal’s common name, nickname, and scientific name. Read the clues for help.
- 2 Starting with Number 1, copy the circled letters, in order, into the blanks on the top of the next page.
- 3 We did Number 1 for you. To finish the puzzle, do the same thing for numbers 2 to 5.



Red velvet ant



Groundhog



Striped skunk



Loggerhead shrike



Hellbender

WHAT IS IT?

— FROM PAGE 1 —

By mid-spring, Missouri’s woods are dotted with the shiny green, umbrella-shaped leaves of mayapples. Where you find one mayapple, you’ll likely find dozens. That’s because mayapples sprout from rhizomes (rie-zomes), stems that grow horizontally underground. Although mayapples flower in May, their fruits, or “apples,” don’t ripen until summer. You can eat the “apple” when it’s ripe, but the rest of the plant is poisonous.





Common Name

Nickname

Scientific Name

1 **Loggerhead shrike**
 This robin-sized songbird preys on small animals such as insects, lizards, and rodents. **L**oggerhead refers to the bird's unusually large head in relation to its body.

Polecat
 Although this cat-sized animal rarely **e**ats chickens, "pole" comes from the French word "poule" which means "hen."

Cryptobranchus alleganiensis
 "Cryptobranchus" means "hidden gill." As an adult, this animal doesn't have gills. Instead, it absorbs oxygen from water through the wrinkly folds of its skin.

2 **Striped skunk**
 Two kinds of skunks live in Missouri. Spotted skunks have white spots on their black coats. Striped skunks, have — you **g**uessed it — white stripes on black coats.

Slime otter
 This animal's **e**ntire body is covered with a thin, clear slime. The slime protects the animal and helps it glide through water.

Mephitis mephitis
 "Mephitis" is a Latin word meaning "bad odor," which certainly applies to this stinky animal.

3 **Hellbender**
 The **h**ellbender is Missouri's largest salamander. It lives in clear, cold streams in the Ozarks.

Butcher bird
 This bird's habit of skewering its prey **o**nto thorns or barbed wire has earned it the nickname "butcher bird."

Marmota monax
 "Monax" comes from a Native American word for "digger," which refers to this animal's **h**abit of digging an underground den.

4 **Groundhog**
 This chubby member of the squirrel family **d**igs burrows in the ground in which to live and hibernate.

Cow killer
 This animal's sting is so painful, some people claim it could **k**ill a cow. This isn't true, but its sting sure will make you cry, "Ouch!"

Lanius ludovicianus
 "Lanius" means "butcher," which refers to this animal's habit of **s**toring prey for later use.

5 **Red velvet ant**
 The common name for this fuzzy insect isn't quite right. **R**ed velvet ants are related to ants, but they are actually wasps.

Whistle pig
 When **s**tartled, this chubby animal give a loud, shrill whistle.

Dasyutilla occidentalis
 "Dasy" is **G**reek for "hairy," which refers to this animal's fuzzy, velvet-like appearance.

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CRITTER CORNER

Baby Raccoon



Stick 'em up. The black fur surrounding a raccoon's eyes looks a bit like a robber's mask. But the only thing this bushy-tailed bandit wants to steal is food. In wild places, raccoons use their nimble paws to swipe things like frogs, crayfish, mice, eggs, and berries. In cities, the masked mammals aren't above helping themselves to pet food or tipping over trash cans.